I. NATURE OF THE ACTION

- 1. Plaintiff Arista Networks, Inc. ("Arista") brings this action against Defendant Cisco Systems, Inc. ("Cisco") under Section 2 of the Sherman Act, 15 U.S.C. § 2, and California's Unfair Competition Law, Cal. Bus. & Prof. Code § 17200 et seq.
- 2. This case is about Cisco's "at all costs" strategy to suppress competition and maintain its hegemony in the data center. Arista knows from experience that vigorous competition is the fulcrum of the economy. Indeed, it is Arista's innovations that are helping to transform the data center, benefitting key sectors of the economy such as "cloud computing."
- 3. But Cisco, realizing that it is being out-competed and out-innovated by a far smaller competitor, has resorted to a scheme of anticompetitive conduct to retain its monopoly in the data center. Cisco knows what is at stake.

Cisco therefore has embarked on a scheme,

see Ex. A, in its effort to maintain its monopoly by improperly and illegally foreclosing Arista and others from competing effectively in the market.

4. Cisco's illegal and anticompetitive conduct, detailed below, is the last resort of an incumbent monopolist who fears competition from more innovative firms that threaten that monopoly. Its goal and effect is to maintain Cisco's monopoly by improperly foreclosing customers from accessing rival products, locking those customers into Cisco's legacy technology, in a world where – absent the lock-in – the customer would prefer to choose more innovative products from other firms. Upon information and belief, Cisco has induced Arista's business partners to cease doing business with Arista in the United States in an effort to perpetuate and increase its monopoly power. Cisco's illegal conduct has harmed, and unless stopped will continue to harm, competition in the market for Ethernet switches. And customers are the ultimate losers, because they end up with a poorer alternative as a result of Cisco's manipulation. This action seeks to remedy that problem and restore competition to the data center.

II. THE PARTIES

- Plaintiff Arista is a corporation organized and existing under the laws of
 Delaware, having its principal place of business at 5453 Great America Parkway, Santa Clara,
 CA 95054.
- 6. On information and belief, Defendant Cisco is a corporation organized and existing under the laws of California, having its principal place of business at 170 West Tasman Drive, San Jose, CA 95134.

III. JURISDICTION AND VENUE

- 7. This Court has subject matter jurisdiction under 28 U.S.C. § 1337 (commerce and antitrust regulation) and 28 U.S.C. § 1331 (federal question), as this action arises under Section 2 of the Sherman Act, 15 U.S.C. § 2, and Section 16 of the Clayton Act, 15 U.S.C. § 26.
- 8. This Court has supplemental subject matter jurisdiction of the pendent state law claims under 28 U.S.C. § 1367.
- 9. Venue is proper in this District because Defendant Cisco has its principal place of business in this District and is subject to personal jurisdiction in this District. In addition, venue is proper because Cisco's unlawful conduct occurred and was masterminded by senior Cisco executives in this District, and because Arista has suffered harm in this District.

IV. INTERSTATE COMMERCE

10. The acts complained of herein have occurred within the flow of, and have substantially affected, interstate trade and commerce.

V. BACKGROUND FACTS

A. Ethernet Switches

- 11. For nearly two decades, Cisco has dominated the market for Ethernet switches. Ethernet switches connect computers, servers, storage and other devices together to form a network. These switch-controlled networks are connected through routers (another product in which Cisco has long-entrenched dominance) to form the Internet.
- 12. It is hard to overstate the importance of Ethernet switches and routers to modern communications. As Cisco itself has explained, "switches and routers are the building blocks for

all business communications, from data to voice and video to wireless access." (Hereinafter, emphasis in quotations is added unless otherwise noted). Without Ethernet switches, most modern businesses of any size would be unable to operate. Even more importantly, continued advances in Internet-based technologies, such as services provided "in the cloud," depend on continued rapid advances in switch innovation.

- 13. Cisco is a monopolist in the approximately \$23 billion global market for Ethernet switches as well as the \$10 billion U.S. Ethernet switch market¹. Its sales and market shares are approximately thirteen times its closest switch competitors, and 5.5 times its Ethernet switch competitors in the United States.
- 14. Cisco has maintained its market dominance for at least fifteen years, with market shares always exceeding 50%, and at times exceeding 70%. Analysts frequently have referred to the competitors in the Ethernet switch space as "Cisco and the seven dwarfs."
- 15. Cisco publicizes the fact that it occupies the #1 position in major networking products (such as for Enterprise routing, wireless LAN, and telepresence in addition to Ethernet switches). That overall network-product dominance provides a significant barrier to entry into the global and U.S. markets for all Ethernet switches.
- 16. Ethernet switches operate at various speeds, and Ethernet switches operating at the highest speeds are referred to as *high-speed* Ethernet switches. High-speed Ethernet switches are used for, *e.g.*, data centers and cloud services. As explained in detail below, Cisco has monopolized the global and U.S. markets for all Ethernet switches, and also monopolized the global and U.S. markets for the narrower category of Ethernet switches referred to as high-speed Ethernet switches.
- 17. Over the last several years, the global and U.S. markets for high-speed Ethernet switches have grown several times faster than the global and U.S. markets for all Ethernet switches. Cisco has maintained its dominance in the markets for high-speed Ethernet switches as well, with revenues and shares six times greater than its closest competitors. Cisco consistently

¹ Market share and revenue numbers are based on 2016 figures unless otherwise specified.

and for a long time has maintained a revenue share in excess of 70% for the high-speed Ethernet switch markets, dipping just below that mark only recently. As discussed below, the markets for all Ethernet switches (both global and U.S.) and high-speed Ethernet switches (both global and U.S.) have substantial barriers to entry, which have allowed Cisco's dominance to remain unchallenged. Cisco has enjoyed the ability to exclude rivals in these markets, and as discussed below, has taken and is continuing to take anticompetitive actions to preclude competitors who seek to overcome its monopoly power.

- 18. Arista, which was founded in 2004 and released its first product in 2008, has pioneered a revolutionary approach to scalable, high-speed Ethernet switches that today are being used in data centers of companies that provide financial services, social media, ecommerce, cloud computing, and scientific computing, as well as in many government agencies. Cisco has sought to eliminate the competitive threat that Arista poses by leveraging Cisco's monopoly power, rather than by competing on the merits with better or cheaper products.
 - 19. Cisco's own competitive analyses confirm the threat Arista poses to Cisco.

15

Ex. C. As one senior Cisco employee put it, "Arista is truly an amazing company," and Arista's founder is "a genius" whom "Cisco should fear whenever he treads nearby." See Ex. B.

20

Cisco's Attempt – and Failure – to Develop its Own "Arista killer" В. Technology

23

26

27

28

20. In response to this competitive threat, Cisco has repeatedly tried, and failed, to counter Arista's innovation and market success. For example, in 2012, Cisco formed a "spin-in" called Insieme Networks ("Insieme"), comprised of Cisco engineers, for the express purpose of trying to develop what Cisco's CEO John Chambers described as an "Arista killer" line of products. Cisco funded Insieme with over \$100 million in 2012, and then spent over \$800 million as part of its official spin-in into Cisco in 2013. Insieme heavily recruited Arista engineers with high-priced contracts before its spin-in into Cisco. Arista, however, has

1

9

6

10 11

13

14

12

15

16 17

18 19

20 21

22

23 24

25

26

27 28 continued to innovate, and although Cisco spent nearly one billion dollars on Insieme, it failed to become the "Arista killer" that Cisco had hoped.

- 21. Having failed to slow Arista in the marketplace, Cisco has resorted to other tactics to preserve its longstanding Ethernet switch and high-speed Ethernet switch monopolies. For example, Cisco concluded that it was "[c]ritical to prevent [the] potential Arista [initial public offering]," see Ex. C, and so it determined to "do anything we can to slow or stop their IPO" in order to prevent Arista from solidifying its position as a competitive threat. That strategy also failed, and Arista successfully launched its IPO in 2014.
- 22. Unable to slow Arista through competition on the merits, Cisco has now turned to anticompetitive conduct that includes an effort to turn customers' own investments in the management of their networks into a trap that locks them into purchasing only Cisco Ethernet switches, including high-speed Ethernet switches. These claims address each anticompetitive scheme in more detail below.
 - C. Command Line Interface: Cisco's Anticompetitive Scheme to Forestall Competition
- 23. Hundreds of thousands of network engineers have spent months, if not years, learning how to configure and control Ethernet switches by entering text commands into the "command line interface," or "CLI," that instruct the switches to perform specific functions. In aggregate, they have spent millions of person-years actually working on networks with Ethernet switches configured and controlled by CLI commands. These text commands are similar to those used on early PCs running operating systems such as Microsoft DOS. Unlike later PCs, which can now be controlled using operating systems with "graphical" user interfaces and virtual buttons (such as "print"), Ethernet switches require network engineers to use many more commands than can be handled through graphical controls. Consequently, network engineers who manage networks of switches must still either manually enter their commands into the CLI, or write programs (called "scripts") that automate strings of commands.
- 24. CLIs have existed since the 1960s, long before Cisco was founded as a company, and CLI commands were used with the first operating systems such as TOPS-10, TENEX, and

UNIX. Upon information and belief, when Cisco developed its first Ethernet switches, it drew from CLI commands already used with these and other operating systems. For example, Cisco's internal documents acknowledge that TOPS-20, another pre-existing operating system, was a basis for CLI commands used with Cisco switches. And Cisco also appears to have derived numerous CLI commands from pre-existing technical standards. The reason was simple: because the purpose of CLI commands is to make Ethernet switch monitoring and configuration as easy as possible for network engineers, Cisco had a strong incentive to use commands with which engineers were already familiar.

- 25. As Cisco's documents confirm, Cisco knew that the CLI commands it used had become widely familiar to network customers between 1993 and 2000, and that "customers ha[d made a] huge investment" in learning those commands and incorporating them into scripts. *See* Ex. D. This was no accident. For over a decade, Cisco has represented to customers that the CLI commands it used were "industry standard," thus assuring customers that their investments in learning the commands and writing scripts that incorporate them would not lock the customers into using Cisco's products, because the same commands could be used to operate other vendors' switches. Cisco also repeatedly referenced CLI commands with other technologies such as Simple Network Management Protocol ("SNMP") and Extensive Markup Language ("XML") that have been adopted by standard-setting organizations.
- 26. Cisco greatly benefited from its representations that its operating systems used "industry standard" CLI commands, because Ethernet switches can last for ten years or more, and most customers purchase them incrementally over time. By representing to actual and potential customers that Cisco Ethernet switches could be controlled using "industry standard" CLI commands, Cisco assured customers that they could undertake significant investment in the CLI by writing scripts using standard CLI commands, training their network engineers in CLI commands, and hiring network engineers principally trained in standard CLI commands, while remaining free to purchase the Ethernet switches that best suited their needs from different vendors. This option was important to customers because they participate in a sector where innovation has been rapid and data center performance can be critical to their own ability to

compete. Cisco therefore benefited by making it clear to customers and the industry that it considered "industry standard" CLI commands used in Cisco's operating systems to be an open utility.

27. Cisco knew that its representations also had the effect of inducing other Ethernet switch competitors, when they entered the global and U.S. markets for all Ethernet switches and high-speed Ethernet switches, to use "industry standard" CLI commands. Indeed,

See Ex. F.

And Cisco knew that its competitors such as Dell were marketing their Ethernet switches to customers as using "industry standard CLI" and being "[i]nteroperable with Cisco environments." *See* Ex. E.

, see Ex. F, even while externally,

Cisco actively encouraged customers to make those investments by continuing to characterize the CLI commands as "industry standard."

- 28. Upon information and belief, these competitors, in reliance on Cisco's representations, did not attempt upon entry into the market to develop an alternative set of commands that could be used by customers free of intellectual property claims. Instead, by adopting "industry standard" CLI commands, these competitors enhanced the benefits and use of those commands in the market. Customers greatly benefited from their resulting ability to use a common set of commands across multiple vendors, akin to the benefits of being able to use a single language among their network engineers. Although CLI commands are not innovative or valuable in and of themselves (they typically consist of common terms like "show" and "set," and terms derived from technical standards), they acquire value through customers' investment in them. They are numerous enough that it is time-consuming and expensive for network engineers to learn them, and having to use multiple CLIs could introduce "translation"-type errors into a customer's CLI scripts that could be extremely costly to customers.
- 29. Upon information and belief, had Cisco not represented to industry participants that the CLI commands it used were "industry standard," and instead asserted that those

commands were proprietary and usable only with Cisco switches, industry participants would likely have developed and invested in alternative "industry standard" CLI commands, free from intellectual property claims. They could have done so in a number of ways, including, for example, through standard-setting bodies such as the Internet Engineering Task Force ("IETF"). Indeed, many of the functions that Cisco's now-allegedly proprietary CLI commands invoke are described in IETF or other standards and are available for anyone to use. Had Cisco declared to those bodies, or to competitors or customers, that it believed that the CLI commands it used to invoke certain functions were proprietary to Cisco, participants would have likely defined and specified alternative commands that were interoperable with multiple vendors' switches, as most industry participants want.

- 30. In sum, for more than ten years, Cisco made representations that led customers and the industry to believe that Cisco either did not have or would not assert any intellectual property rights claims in the CLI commands it used, such that customers could invest in those commands without being locked into using Cisco's switches. As a result, industry participants invested in and used CLI commands without challenging Cisco's claim of ownership over them because no such claim was made or attempting to develop, before participants became locked in, an alternative to commands Cisco claimed to own. Because, as explained above, CLI commands are simple and derive their value only from widespread usage, the industry could readily have developed and deployed alternatives to any command Cisco claimed to own if Cisco had only laid open its intention to claim copyright protection at the time it was encouraging widespread use of the commands as an "industry standard" that Cisco led customers to believe they could use with other vendors' switches.
- 31. Now, in order to preserve its monopoly in the face of a real competitive threat on the merits from Arista, Cisco is trying to capitalize on the "barrier to entry" it worked to create. Cisco is reneging on its representations that the CLI is "industry standard," through which it led customers to believe that they were free to use the CLI to interoperate with other vendors' devices. Instead, Cisco seeks to claim that those CLI commands are protected by copyright and to prevent Arista from using them. As part of this overall policy change, Cisco seeks to turn

15

14

17

18

19

16

20

21

22 23 24

25 26

27 28 customers' own investments against them. Although Arista built its own Extensible Operating System ("EOS") from the ground up, Cisco now claims that Arista software's ability simply to understand CLI commands entered by Ethernet switch customers, including high-speed Ethernet switch customers, infringes its copyright. And Cisco has never offered to license Arista to use, for a reasonable royalty, CLI commands in which Cisco claims a copyright interest.

32. Cisco's change in policy is designed to maintain and further expand Cisco's Ethernet switch monopolies. On information and belief, Cisco recognizes that competitors and customers understood its prior representations about what constituted "industry standard" to mean that those CLI commands could operate other vendors' products so that training and scripts could be put to use with non-Cisco switches. In a recent online blog, however, Cisco's General Counsel, Mark Chandler, stated that "[t]he patented and copyrighted features and implementations [of CLI] being used by Arista are *not* industry standards" – despite more than a decade in which Cisco has described the CLI commands it uses as "industry standard." Cisco's reversal in position,

understands the problems with claiming the ability to exclude others from things that it has promoted as industry standard.

demonstrates that it

VI. RELEVANT MARKETS AND CISCO'S MARKET POWER

Ethernet Switch Markets Α.

- 33. Ethernet switches are a relevant product market. Ethernet switches are devices that control data flow within a network to enable network components to communicate efficiently. They are the fundamental building blocks of modern local area networks, deployed in virtually every modern business and government office. While Ethernet switches are differentiated across vendors and customer types, there is no adequate substitute technology that provides the same function and value within a network infrastructure.
- 34. Among these differentiated Ethernet switches are both "high-speed" and lowerspeed Ethernet switches. As explained below, high-speed Ethernet switches comprise their own relevant product market. This is because, inter alia, there are customers that require the

1	technological capabilities of high-speed Ethernet switches, and could not turn to lower-speed			
2	Ethernet switches to meet their requirements. However, for other customers, such as			
3	, high-speed and lower-speed			
4	Ethernet switches are interchangeable, for example for use in deployments in enterprise			
5	"campus" environments.			
6				
7				
8	For these customers, a monopolist of solely high-speed			
9	Ethernet switches could not profitably impose a price increase above the competitive level.			
10	Rather, only a monopolist of all Ethernet switches, including high-speed Ethernet switches,			
11	would be able to profitably impose such a price increase above the competitive level sold to all			
12	customers. To use an illustrative example, a hypothetical monopolist of luxury sports cars may			
13	be able to profitably impose a price increase above the competitive level because of customers			
14	requiring the attributes of a luxury sports car. However, there are also customers for which a			
15	luxury sports car and a non-luxury sports car are interchangeable, and could buy either car type.			
16	As a result, only a hypothetical monopolist of all cars would be able to profitably impose a price			
17	increase above the competitive level for all customers, including those which do not require a			
18	luxury sports car. In this case, Cisco has monopoly power over both the broader switch product			
19	market (e.g., all cars) as well as the high-speed switch submarket containing products therein			
20	with certain characteristics (e.g., luxury sports cars).			
21	35. Thus, there are relevant markets for both the overall market of Ethernet switches			
22	and the submarket for high-speed Ethernet switches. Indeed, these classifications are well-			
23	established in the industry, in which Cisco's and Arista's market shares are reported on an "all			
24	Ethernet switch" basis as well as a high-speed Ethernet switch basis. As explained below,			

27

25

26

because the high-speed Ethernet switch market is growing, Cisco undertook its anticompetitive

strategy to foreclose more innovative competition in the high-speed Ethernet switch market for

the ultimate purpose of maintaining its larger monopoly in the overall Ethernet switch market.

- 36. Routers have been a technology that is complementary to, and not a substitute for, Ethernet switches. Ethernet switches connect components to create a network, and routers allow for communication between networks. The two types of devices generally operate at different logical levels in a network: Ethernet switches transfer information in the data link layer using physical addresses for network components, whereas routers transfer packets in the Network or IP layer using virtual addresses. As technology has evolved, Ethernet switch manufacturers have begun to incorporate certain routing technologies into a single combined product. This confirms that routers are complements for Ethernet switches and not substitutes.
- 37. Buyers of Ethernet switches would not be able to turn to alternative technologies in response to a monopolist's price increase above the competitive level.
- 38. The geographic markets for the sale of Ethernet switches are (i) the United States and (ii) the world. The global market for Ethernet switches includes manufacturers with product portfolios that are worldwide in scope, and multinational customers that have a demand for such global capability. There is substantial industry recognition of both a global market for Ethernet switches and a narrower U.S.-only market. A hypothetical monopolist of Ethernet switches in the United States would be able to raise prices profitably over competitive levels.

 Correspondingly, a hypothetical monopolist of Ethernet switches globally would be able to raise prices profitably over competitive levels. In fact, Cisco itself has been able to maintain prices above competitive levels both globally and in the United States.
- 39. Ethernet switch suppliers compete for sales to global customers and national customers. Accordingly, it is appropriate to analyze the competitive effects of Cisco's conduct in a global market and in the national market in which vendors compete.
- 40. Cisco has monopoly power in the U.S. and global markets for Ethernet switches, consistently holding a share in excess of 50% in both markets, and protected by high barriers to entry as discussed below. Cisco's Ethernet switch sales and market shares are roughly thirteen times its closest switch competitors in North America, and 5.5 times its switch competitors globally. Cisco has managed to maintain this market dominance for at least fifteen years, with global and U.S. market shares usually exceeding 50% (and often above 70%).

B. High-Speed Ethernet Switch Markets

- 41. A narrower product market within the overall Ethernet switch market (also sometimes referred to as a submarket) is the market for high-speed Ethernet switches. Customers in this market such as search engines, social networks using data centers, high-frequency traders, and government agencies require Ethernet switches that are able to forward large volumes of data traffic with minimal latency, while also not dropping packets in the process. The cloud network architecture, which depends on high-speed Ethernet switches, differs from the traditional network architecture including the presence of scale-out clusters, a non-blocking design, massive data flows, workload mobility, and automatic provisioning. These cloud network characteristics, among others, motivate the need for a differentiated type of high-speed Ethernet switch.
- 42. Sales of high-speed Ethernet switches are growing significantly faster than sales of all Ethernet switches as a whole due to the explosion of data volume on the Internet. This phenomenon is spurred by ever smaller and lighter consumer devices that rely on cloud storage that is, data stored on servers to which the device connects via the Internet for the bulk of high-speed Ethernet switch customers' storage needs.
- 43. Customers that generally do not purchase high-speed Ethernet switches, particularly small and mid-sized businesses, do not process the same volume of data at the same high speeds as those used by high-speed Ethernet switch customers. In addition, high-speed Ethernet switches can be significantly more expensive than Ethernet switches used for other applications. In a world where an Internet user can easily switch from one search engine to another if search results take too long to appear, every component of a high-speed Ethernet switch customer's network must be tuned to maximize speed and quality.
- 44. Thus, there are customers of high-speed Ethernet switches that would not be able to turn to alternative technologies including, but not limited to, lower-speed switches in response to a high-speed switch monopolist's price increase above the competitive level.
- 45. As detailed below, extensive investment is required to provide products that meet the demands of high-speed Ethernet switch customers. Upon information and belief, many high-

8

13

14 15

16

17

18

19

20 21

22

23

24

26

25

27

28

speed Ethernet switch customers are multinational firms that require suppliers with corresponding global capability.

- 46. The geographic markets for the sale of high-speed Ethernet switches are (i) the United States and (ii) the world. A hypothetical monopolist of high-speed Ethernet switches globally would be able to raise prices profitably over competitive levels; and, correspondingly, a hypothetical monopolist of high-speed Ethernet switches in the United States would also be able to raise prices profitably over competitive levels.
- 47. High-speed Ethernet switch suppliers compete for sales to global customers and national customers. Accordingly, it is appropriate to analyze the competitive effects of Cisco's conduct in a global market and in the national market in which vendors compete.
- 48. Cisco has monopoly power in the high-speed Ethernet switch markets, maintaining a consistent share in excess of 70%, only dipping below that level recently for the first time, in large part due to Arista's innovation. The high-speed Ethernet switch markets also have substantial barriers to entry as discussed below.
- 49. The markets for high-speed Ethernet switches and all Ethernet switch markets are collectively referred to as the "Relevant Product Markets."

C. **Relevant Markets: Summary**

- 50. To summarize, the following markets are relevant markets in this case:
 - All Ethernet switches (both globally and limited to the United States); and a.
 - b. The narrower market of high-speed Ethernet switches (both globally and limited to the Unites States). The markets for all Ethernet switches and the narrower market of high-speed Ethernet switches are collectively referred to as the "Relevant Product Markets".

VII. **BARRIERS TO ENTRY**

51. The Relevant Product Markets are characterized by high barriers to entry and expansion. There are several factors that contribute to these high entry and expansion barriers for potential new entrants and existing competitors. To begin with, the costs to develop Ethernet switch software and hardware are substantial. It requires tens of millions of dollars for initial

development, and then hundreds of millions more to tailor the product to specific customer needs and to build an effective sales network. For instance, Arista has invested hundreds of millions of dollars in research and development ("R&D") to develop and bring to market its innovative Ethernet switch and EOS operating system. (The EOS operating system is the entire operating system including the millions of lines of computer code it comprises, as distinct from the command words used to interface with the operating system.)

- 52. Another barrier to entry for the Relevant Product Markets lies in customers' long purchase cycles when replacing or upgrading their network components to the next technology. For example, it took approximately fifteen years for customers to widely deploy 10+ Gigabit Ethernet switches to replace 1 Gigabit Ethernet switches. These circumstances mean that competitors have limited opportunities to significantly expand their market share.
- 53. As Cisco publicly promotes, it is the number one vendor for major network components often required by customers for their enterprise infrastructures such as for Enterprise routing, wireless LAN, and telepresence in addition to Ethernet switches. Thus, a further barrier to entry is created by the simple fact of Cisco's dominance. Given the relatively high transaction costs for customers, and the presence of bundled offerings, any new Ethernet switch entrant may need to offer a full line of network components. Alternatively, if a new entrant offers only a limited number of network components, as Arista does, those products must greatly exceed the quality of Cisco's and at a much lower price to induce a customer to switch. Cisco's conduct, which if successful would, inter alia, reduce the interoperability of network components from a customer perspective, only serves to further increase these already very high barriers to entry.
- 54. Cisco's anticompetitive policy changes with respect to CLI commands create a particularly insurmountable barrier to entry. Cisco's claim of copyright in the CLI commands entered by customers, either manually by their network engineers or automatically through scripts those customers have written, forces customers who wish to use rivals' Ethernet switches to either re-train their workforce and rewrite their scripts, at a cost that could easily run into the millions of dollars, or forgo the ability to use competitive products.

- 55. Cisco's lock-in and subsequent announcement to customers that its CLI commands, notwithstanding its prior representations, "are *not* industry standards," has created a barrier to entry regardless of whether Cisco's copyright claim is valid. The possibility of a copyright-infringement claim will cause some customers to refrain from purchasing non-Cisco switches that use these CLI commands. But those same customers also may not want to migrate to otherwise superior and/or less expensive equipment that does not use the CLI commands over which Cisco claims copyright, because of the costs involved in (i) training engineers to use different command words; and (ii) operating a system that uses multiple sets of command words.
- 56. Cisco's own documents explain, with unexpected candor, why its conduct with respect to CLI commands acts as a barrier to entry. As Cisco knows, its customers have made a "huge investment" in CLI in reliance on Cisco's prior representations. Being forced at this late date to retrain their engineers and rewrite their scripts imposes high risks on its customers. By "extending and preserving that investment" through its anticompetitive conduct, Cisco substantially increases barriers to entry that already exist.
- 57. Given these barriers to entry and expansion, competition on the merits in the Relevant Product Markets is critical to ensure the resulting benefits to consumers. If Cisco's anticompetitive conduct is not stopped, the anticompetitive harm in the Relevant Product Markets will be long term and likely irreversible.

VIII. CISCO'S OVERALL SCHEME OF EXCLUSIONARY ANTICOMPETITIVE CONDUCT

58. In pursuit of its campaign against Arista,
Cisco has engaged in a course of conduct that has improperly maintained its monopoly power in
the Relevant Product Markets. While the following discussion identifies certain anticompetitive
conduct of which Arista is aware, the law requires that the broad-ranging scheme be viewed as a
whole. Moreover, upon information and belief, variations of the identified conduct will be made
apparent through discovery.

A.

1. Common CLI Commands Have Been Adopted by Users for Decades

Cisco's Policy Reversal for the Purpose of Impeding Competition

59. A network engineer communicates with and manages an Ethernet switch through a set of words referred to as command line interface ("CLI") commands. While customers select an Ethernet switch based on its performance, reliability, operating system features, and hardware — which costs switch manufacturers tens of millions of dollars to develop and hundreds of millions to bring to market — CLI commands are simply the communication mechanism that serve to configure, monitor, and debug Ethernet switches. There is no inherent value in CLI commands; they are purely functional. But there is significant value in the widespread knowledge among network engineers of which commands to use for which features. For example, if an engineer wanted to set the time on an Ethernet switch in her datacenter, she would type the command "clock set" followed by the time desired. An alternate command — such as "clock time" — could perform this function just as well, but the fact that network engineers have been typing "clock set" for decades makes it valuable to the industry as a standard.

- 60. The practice of managing computing devices through CLI commands is long established. As early as the 1960s, companies like Digital Equipment Corporation began developing operating systems for computing devices that needed to communicate with each other and with customers. Customers of such systems used a CLI for their configuration and management. For example, Digital Equipment Corporation launched its Total Operating System (TOPS-10) for its mainframe computer in 1967. Customers could manage TOPS-10 by using CLI commands. Not long after, the TENEX operating system was created to run on a subsequent version of Digital Equipment Corporation's mainframe computer. Like TOPS-10 before it, and the subsequent TOPS-20, TENEX was an operating system purchased by users who used CLI commands to communicate with the operating system.
- 61. In the early 1970s, UNIX another early operating system was developed by Bell Labs (later licensed to academic and commercial third parties). Customers also interacted with the UNIX operating system through CLI commands, which continued to evolve through several versions of the operating system over the following decades.

- 62. Upon information and belief, before Cisco was even in existence, users had already grown accustomed to using CLI commands so that they did not have to re-learn them each time they employed the same function on another platform.
- 63. Thus, before Cisco offered its first Ethernet switch, CLI users already had accepted that CLI commands were not in any way innovative or valuable except for the fact that there was widespread knowledge of commands across users.
- 64. As a result, upon information and belief, Cisco's first Ethernet switch and router products, introduced in the 1980s and early 1990s respectively, drew from commonly accepted CLI commands that were already in use wholly separate from their use with Cisco's products. According to Cisco's internal documents, for example, these commands drew from prior TOPS-20 commands. And Cisco also appears to have drawn extensively from pre-existing technical standards.
- 65. As users adopted Ethernet switch technology from new competitors, they continued to use existing, commonly accepted commands already familiar to them. Moreover, as suppliers added new functionality in response to customer demand, users became familiar with CLI commands associated with that functionality. When that functionality and the associated commands are adopted widely, the latter becomes part of the body of commonly accepted commands.
 - 2. Cisco's Long-Standing Policy Encouraged Reliance on Industry-Standard Commands

66.

see Ex. G,

For over a decade, Cisco has aggressively sold its products on the basis that the Cisco CLI commands are a widely-used "industry standard," and compared CLI to other industry standards such as SNMP and XML. As an example, Cisco has touted in its worldwide marketing materials that its products implement industry-standard commands, thereby offering customers the benefit of "enhanced end-to-end manageability." In so doing, Cisco expressly highlighted the fact that customer familiarity with these industry-standard commands

has resulted in its adoption across firms, resulting in easier integration of competitors' products into a customer's network by eliminating the need to learn a completely different CLI. Cisco has also publicly noted that "[t]he Cisco IOS CLI has essentially become the standard for configuration in the networking industry." Cisco's data sheets, manuals, and other public statements told the marketplace, for instance, that Cisco's new IOS XR, could be easily managed through "industry-standard management interfaces, including a modular command-line interface (CLI), Simple Network Management Protocol (SNMP), and native Extensive Markup Language (XML) interfaces" – interfaces that are known standards within the technical community.

- 67. Cisco made similar representations to a standard setting body called the Internet Engineering Task Force ("IETF"). The IETF publishes standards regarding a number of areas (including Applications, Operations and Management, Real-time Applications and Infrastructure, Routing, Security, Transport, and General Internet), and company representatives submit drafts and submissions in contribution to those standards (called, *e.g.*, draft Requests for Comment ("RFCs") and Internet drafts). Cisco has made several submissions, including Internet drafts, working group emails, and draft RFCs that specifically incorporate commands that Cisco was promulgating for use within a standard. The point of using these commands in this type of industry setting has been to provide commands that would be utilized in conjunction with the standard, which has the effect of encouraging engineers to rely on an industry-standard set of commands.
- 68. All such statements were made pursuant to Cisco's policy to *encourage* customers and competitors to utilize the commands incorporated into Cisco's IOS CLI, just as Cisco had drawn upon pre-existing CLI commands when entering the switch market (referred to hereinafter "Cisco's long-standing policy"). Thus, Cisco's long-standing policy had two complementary purposes: (i) it allowed Cisco to ensure customers *ex ante* that, in choosing the dominant provider, they were not locking themselves into Cisco should competitors develop more innovative or efficient products that also responded to using these industry-standard commands; and (ii) it forestalled other industry participants from acting in response to any purported

3

6

9

12

13

14 15

17 18

16

19 20

21 22

23

24 25

> 26 27

28

intellectual property claim by Cisco, such as by promoting and standardizing an alternative CLI that Cisco would not govern.

- 69. For over a decade, Cisco intentionally made representations about industrystandard commands without qualifying those statements with any assertion of copyright or other intellectual property rights in the CLI commands. On information and belief, Cisco did so knowing that its statements would induce industry players to use those commands rather than standardizing an alternative, and to do so without challenging any Cisco copyright claim.
- 70. Cisco's long-standing policy did not delineate between CLI commands that already had been in use for decades before Cisco even began supplying Ethernet switches and the set of CLI commands adopted by the industry since that time. Nor did this policy distinguish between CLI commands used in response to features introduced by Cisco or by other vendors. Rather, Cisco's long-standing policy was to treat all of the CLI commands its users had adopted, regardless of when users started using such commands, as "industry-standard CLI." Thus, observers of Cisco's long-standing policy and its corresponding marketplace statements about industry-standard CLI would reasonably infer that Cisco would not assert any intellectual property rights in CLI commands.
- 71. In reliance on Cisco's long-standing policy, when competitors such as Dell, HP, Pluribus, and Enterasys entered the market in the 1990s and into the 2000s, they each specifically highlighted to customers that, while their Ethernet switches were differentiated from Cisco's, engineers could still use the industry-standard commands that they had been trained to use previously. In making a presentation on the viability of its software management solutions, HP emphasized their products' "ease of migration and leveraging existing knowledge," including incorporation of industry-standard commands. Dell refers to an "industry-standard CLI" among the features listed on the specification sheet for its Ethernet switches. In promoting its MicroBlade product, Pluribus claimed that "key to the MicroBlade is the Pluribus Networks Netvisor, providing a rich set of L2/L3 networking services based on an industry-standard CLI." Similarly, Enterasys highlights its products' "powerful management and configuration tools – including industry-standard Command Line Interface."

1	72. Cisco was a
2	
3	
4	different, as Cisco also kno
5	
6	See Ex. H. Cisco al
7	the result of which was to
8	into network[s]," "less tim
9	73. Not only Ci
10	competitors to Cisco used
11	founding, Arista won an av
12	according to the prominent
13	innovative operating system
14	of these improvements wh
15	aware of this competitive of
16	action against certain empl
17	74. Notably, ev
18	it has, on information and
19	mode into its products that
20	industry standard. In other
21	same industry-standard con
22	significant and powerful pl
23	and competitors relied upo
24	commands.
25	75. In reliance of
26	dollars in training network
27	already trained to do so).
28	engineers working in large

acutely aware of this adoption by rival firms.

Arista was no

Iso knew that Arista promoted EOS as using "industry standard CLI," benefit customers by enabling them to engage in "seamless integration e spent in operational training," and "engineering awareness."

- isco, but customers and others in the industry, knew that switch industry-standard CLI. For example, in 2010, two years after its ward for having the best switch in the industry – beating out Cisco – t industry publication Network World. Arista's switch included its m, EOS, and as Network World noted, customers could take advantage ile using an "IOS-like CLI" to manage the switch. (Cisco was acutely development and, upon information and belief, Cisco took adverse loyees upon learning that Cisco had lost the award to Arista.)
- ren when a vendor such as IBM has developed its own CLI commands, belief, invested significant resources to incorporate an alternative is designed to emulate the CLI commands that Cisco described as r words, IBM customers could use an emulation mode to access the mmands they were familiar with and had been trained upon. This is a henomenon, because it further illustrates the extent to which customers on Cisco's policy of encouraging use of the industry-standard
- on these market events, as Cisco knew, customers invested millions of engineers to use industry-standard commands (or paying engineers Becoming proficient in CLI takes approximately six to nine months for data centers, and a six-month period of interspersed training for

3 4

5

6 7

9

8

11 12

10

14 15

13

16

17

18 19

20

21

22 23

24

25 26

27

28

smaller enterprise customers. Becoming proficient in a completely new version of CLI commands would be costly for customers because it is time-consuming.

- 76. Customers also have invested significant resources in creating "scripts" – programs designed to invoke a large number of CLI commands automatically – to make Ethernet switch management for their engineers more time-efficient. For example, rather than manually configuring each Ethernet switch in a new network, an engineer might write a generic script that includes all of the necessary CLI configuration commands. The engineer can then programmatically apply the script to each switch one after the other. The use of industrystandard commands in these scripts makes them far more efficient and useful, because they can be used across competing vendors' products. Some customers have communicated that they would not consider purchasing new Ethernet switches unless they were compatible with their entire existing script infrastructure.
- 77. Not only Cisco's internal documents, but also its external filings, show that Cisco has known for at least ten years that both customers and competitors made significant investments in reliance on Cisco's policy of encouraging use of industry-standard CLI commands. For example, in a patent application filed in 2005, later granted as U.S. patent number 7,953,886, Cisco inventors echoed Cisco's prior statements about CLI commands being commonly adopted. The Cisco inventors described IOS CLI commands in the section of the patent entitled "Related Art" and stated that those commands had been developed over "twenty years" and referred to "consistency" and "backwards compatibility" in those commands. Nowhere in the written disclosure of the patent, which was first published in January 2007, did the Cisco inventors suggest that Cisco had any proprietary rights in any IOS CLI command. Rather, Cisco acknowledged that "many consumers have invested heavily in IOS CLI support, developing complicated scripts to handle various configuration and access needs." In the same application, Cisco recognized that "many companies now strive to support some variation on IOS CLI." All of those statements together would leave the reader with the impression that IOS CLI commands were in the public domain - or, at a minimum, that Cisco did not claim any proprietary rights in them.

28

- 78. Similarly, Cisco sold networking products that were designed to interoperate with other vendors' switches, and that used those other vendors' CLI command sets, even when those command sets differed from the "industry standard" commands used by Cisco. For example, Cisco sold implementations of its CiscoWorks Network Compliance Manager products and its Cisco Tail-f products that communicated with competitors' Ethernet switches by using those competitors' CLI command sets. On information and belief, Cisco did not obtain, or even seek, licenses from those competitors before incorporating their CLI commands into Cisco's products. Instead, it openly adopted and used other vendors' CLI commands in its own networking products conduct that further confirmed to industry participants and observers that Cisco considered CLI commands to be in the public domain and usable without a license.
- 79. Cisco also marketed and sold products by representing to customers that they could – and should – use the CLI commands used by Cisco to operate other vendors' switches. For example, the Cisco Tail-f Network Control System ("NCS") is a tool that system administrators use to configure networks. According to Cisco, one of its "key functions" is "[m]ulti-vendor device configuration modification in the native language of the network devices." In other words, Cisco advertised that the NCS can configure multiple different vendors' switches by communicating with each switch in its "native language." Cisco explained in the NCS's publicly available product literature that one of the NCS's drivers communicates with "any device with a CLI that resembles Cisco's," and that this driver "is used for most CLI based devices like Alcatel-Lucent, Ericsson, Force 10, etc." Thus, Cisco marketed and sold networking products for the express purpose of using "a CLI that resembles Cisco's" to communicate with non-Cisco switches. Again, the industry and customers would – and on information and belief, did – understand from Cisco's conduct that (1) Cisco knew that "most CLI based devices" used "a CLI that resembles Cisco's," and (2) Cisco agreed and intended that customers could use the CLI commands used by Cisco to operate other vendors' devices.
- 80. As Cisco was promoting the "industry standard" nature of its CLI, it was itself incorporating terms from standard-setting bodies IETF and IEEE into CLI commands for new features and protocols for switching. Hundreds of commands in Cisco's CLI command set

derive in whole or in part from an IETF Internet Standard or IEEE standard. For example, the following terms, which Cisco uses to define "hierarchies" of its CLI commands in which it claims copyright, are just some of the "industry standard" CLI command words that come from published IETF standards: IP, IGMP, IPV6, OSPF, BGP, and VRRP. Even many of Cisco's multiword commands also come directly from these standards. Just some examples of these include: "vrrp authentication", "spanning-tree port-priority", "ptp domain", and "bgp confederation identifier." Cisco's use of terms such as these and others from standards publications confirmed the industry's understanding that when customers, other switch vendors, and network engineers invested in the training and use of the Cisco-promoted "industry standard" CLI, they would not later be threatened by Cisco with a claim that that the industry-standard CLI is in fact uniquely Cisco's.

- 81. On information and belief, customers and industry players relied upon Cisco's long-standing policy and consistent conduct, without warning from Cisco that the very investments they made in reliance on the policy could later be used against them to lock customers into Cisco's inferior technology should Cisco reverse the policy in the face of a competitive threat.
- 82. In sum, Cisco embraced, promulgated, and leveraged the standardization of CLI commands for more than a decade. Cisco's internal documents, as well as its external filings, confirm that it knew that customers and competitors relied on its conduct, in the form of tens of millions of dollars of training, hardware, and software investments, because they had no reason to expect that it would change. Unfortunately it did. Cisco has now decided to opportunistically exploit these customer and competitor investments in order to maintain its market dominance in the face of a real competitive threat from Arista.

3. Cisco's Reversal of Its Long-Standing Policy

83. Upon information and belief, Cisco reversed its long-standing policy in 2014 by notifying customers and competitors industry-wide that use of "its" CLI was reserved exclusively for use with Cisco's products. One of the ways Cisco carried out its policy reversal was to announce to the industry that it claimed copyright infringement from Arista's use of 514

26

27

28

CLI commands. In direct contradiction of its long-standing policy and prior representations, Cisco's General Counsel claimed in an online blog that "[t]he patented and copyrighted features and implementations [of CLI] being used by Arista are *not* industry standards." Cisco implemented this policy reversal without even an offer of a license on reasonable terms to its claimed copyrighted CLI commands; and in contrast to its years of representations, Cisco even sought injunctive relief against the use of those commands. Thus, any customer who uses CLI commands that Cisco previously promoted as "industry standard" is now at risk of facing the need either to rewrite its scripts and retrain its engineers, or to replace all of its non-Cisco Ethernet switches.

- 84. Cisco's policy reversal has been carried out in the marketplace. For example, upon information and belief, Cisco has been telling customers that they should not invest in any of Arista's Ethernet switches because such products would soon be pulled off the market. Upon information and belief, these threats were made pursuant to Cisco's policy change.
- Cisco's reversal of policy and its execution of this reversal of policy in the 85. marketplace harm competition and consumers. As a result, scenarios like the following are likely: A Cisco Ethernet switch customer decides that a competitor's product offers the best performance and value. The competitive Ethernet switch also offers a new innovative feature that the non-Cisco competitor spent millions to develop. As part of configuring the new feature, an engineer at the customer must type the industry-standard command "interface ethernet." This command is also used within extensive scripts that the customer previously developed for use, and the customer had trained its engineers in the use of industry-standard commands. The effect of Cisco's policy reversal is that if the customer wants to adopt the competitor's technology, the competitor would need to change the command "interface ethernet" and all other required industry-standard commands to different words. The customer potentially would have to rewrite the extensive scripts it already has completed, wherever they appear, potentially in dozens to thousands of different scripts used by hundreds of engineers, and retrain all of its engineers to use the new non-standard commands. In addition to the significant upfront costs, customers forced to use the non-standard commands would likely face increased maintenance costs as

12

13

8

20

21

17

18

24

25

26 27

28

engineers accustomed to industry-standard commands would be more prone to introduce errors into the network, which could result in millions of dollars in additional costs for the customer.

- 86. Thus, with major customers unable to efficiently integrate competitive products because of Cisco's conduct, Cisco's dominance will not be challenged. Cisco will retain or even expand upon its status as the dominant and default switch vendor, preventing competitors from competing effectively despite any technological and efficiency advantages they offer vis-à-vis Cisco.
- 87. Upon information and belief, Cisco has engaged in other conduct pursuant to its policy reversal that is specifically designed to foreclose competitive entry and expansion that would benefit customers. This necessarily drives up costs for Cisco's competitors, both in terms of their transaction costs and their ability to sell Ethernet switches on the merits as opposed to how they adapt to Cisco's change in policy.
- 88. Cisco knew for years that its competitors' Ethernet switches were being managed with the same industry-standard commands it used, which it now claims are proprietary, and did nothing. It explicitly acknowledged customers' investment and reliance upon the industrystandard CLI in company documents. As part of the regular course of business, Cisco – and other vendors – have acquired competitors' products for benchmark testing, necessitating knowledge and use of each competitor's CLI. As discussed, Cisco encouraged the very reliance on industry-standard CLI that it observed for itself in the marketplace prior to its change in policy.
- Cisco's anticompetitive scheme is not limited to its policy reversal regarding 89. industry standard CLI commands. The above anticompetitive strategies are examples of the type of conduct that is part of Cisco's overall scheme. Upon information and belief, there are other facets of Cisco's overall strategy, such as interfering with Arista's relationships with its vendors and suppliers, including at least one with which Arista had done business for several years. Upon information and belief, Arista's vendors and suppliers have been led by Cisco to believe that if they did business with Arista in the United States, Cisco would not do business with them. The threat is coercive because most vendors need to be able to do business with Cisco.

IX. CISCO'S OVERALL SCHEME HARMS CONSUMERS AND STIFLES MORE INNOVATIVE AND EFFICIENT TECHNOLOGY

Cisco's multifaceted scheme forecloses the first real chance for competition in the

90.

Relevant Product Markets.

Again, while the following discussion identifies some of the harmful effects of Cisco's conduct in the Relevant Product Markets, the Court should consider the effects of this broad-ranging scheme as a whole.

- 91. Cisco's course of conduct targets consumers in the Relevant Product Markets. Absent this Court's intervention, Cisco will continue to maintain supra-competitive prices for less-innovative technology in the Relevant Product Markets. Because customers are now unable to consider offerings on the merits, for instance if competitors provide more reliable or faster Ethernet switches (as Cisco acknowledges in its documents), such customers in the Relevant Product Markets are likely to pay supra-competitive prices for less-innovative technology. Indeed, Cisco itself would likely be forced to lower its prices to the benefit of consumers if more innovative competition was not foreclosed. Instead, upon information and belief, Cisco is able to suppress its output and maintain supra-competitive prices.
- 92. Customers can no longer compare products on the basis of their technological innovations or efficiency. While Cisco's acts to suppress more innovative products are classic antitrust harms, Cisco is also robbing customers of a choice on the merits. For instance, Cisco has forced customers to assess whether competitors' products are now long-term viable investments given its policy reversal. Customers cannot viably answer this question because they cannot predict how Cisco will implement its new policy next. Indeed, customers may decide that due to the long-term investments they made in reliance on Cisco's many representations that commands were industry-standard and thus interoperable with other vendors' switches, it does not matter how much more innovative or efficient another technology may be given the investments they would have to remake to support competing technology products that are intended to be operational over a five- to fifteen-year life cycle.

- 93. Indeed, the capital investment made by customers in Ethernet switches runs into the billions (the global Ethernet switch market is currently more than \$23 billion annually and growing); thus, customers treasure the ability to choose the product that offers the best performance and best value. Cisco's conduct hinders them from doing so. Indeed, upon information and belief, customers' prior "huge investment" (as Cisco itself described it) in Cisco's Ethernet switches is now preventing customers in the Relevant Product Markets from making choices on the merits due to Cisco's policy change.
- 94. Cisco's conduct freezes the Relevant Product Markets and disincentivizes customers from buying competitive Ethernet switches even when they are the most cost effective and/or innovative technology in the Relevant Product Markets.
- 95. In addition, Cisco's conduct drives up its competitors' costs in the Relevant Product Markets by forcing competitors to justify to customers that it is permissible for their products to utilize CLI commands that Cisco characterized as industry-standard commands. In addition, upon information and belief, if a large customer's scripts had to be modified to accommodate non-industry-standard commands, it would increase the cost of implementing a non-Cisco vendor's product by millions of dollars.
- 96. Cisco's conduct has had debilitating effects upon innovative competing suppliers in the Relevant Product Markets. Without being able to penetrate customers that have spent millions training their employees and building scripts based on industry-standard commands, competitors' ability to achieve the viable scale needed to compete will be difficult, if not impossible. Under these circumstances, some competitors may decide that there is no business case for long-term investment in their products, and be forced to exit the market, reducing further the very modest competitive pressure in the market. Even competing suppliers that manage to remain in the industry will have smaller budgets to invest in R&D, which will result in a chilling effect on innovation. As a result, customers will be limited in their ability to choose the most innovative suppliers in the Relevant Product Markets, and will be forced to continue paying supra-competitive prices for Cisco's products.

- 97. Indeed, Cisco itself has been at the forefront of advocacy in favor of patent-law reform to combat the anticompetitive effects associated with a monopolist's "ambush" of customers and competitors based on their adoption of an industry standard. Cisco's chief inhouse antitrust counsel and General Counsel have repeatedly announced that, where customers and competitors adopt a standard on the premise that no proprietary rights were associated with that adoption, any ex post assertion of such alleged proprietary rights "has a much higher value ex post than ex ante." These comments highlight Cisco's recognition that the very kind of conduct in which it is engaged here is harmful to competition and consumers. In addition, these types of statements, made before its policy reversal, further encouraged the industry to believe that Cisco would not assert alleged intellectual property in an industry-standard utility.
- 98. As discussed, the Relevant Product Markets encompass technology that is pivotal to the Internet and e-commerce as a whole, both now and even more so in the future. Leading technology companies depend upon continued rapid advances in high-speed switch technology to support their own ability to innovate. Thus, the anticompetitive effects of Cisco's conduct will inevitably spill over into other markets depending on that innovation. Global and U.S. consumers of all such technology will ultimately pay the price of Cisco's exclusionary conduct if Cisco is not enjoined.

X. CISCO HAS NO BUSINESS JUSTIFICATION FOR ITS CONDUCT, AS ITS SOLE PURPOSE IS TO FORECLOSE COMPETITION

99. Cisco has no valid business justification for its conduct – its sole purpose is the suppression of competition, and its exclusionary conduct offers the market no procompetitive benefit. The only thing that changed before Cisco's reversal of its policy was the emergence of more innovative and more efficient competitors that provided the first real threat to its monopolies. Faced with this threat, Cisco's then-CEO and current Chairman John Chambers directed,

- 100. Upon information and belief, in the absence of Cisco's long-standing policy and its recent reversal, competitors and customers would not have been locked into industry-standard CLI. Rather, customers would have demanded and used CLI commands that did not potentially lock them into any particular vendor, and competitors would not have adopted CLI commands that could be used to foreclose them from the Relevant Product Markets. Again upon information and belief, the competitive dynamics of the Relevant Product Markets in terms of both manufacturer investments and customer reliance, including, *e.g.*, the development of scripts and the training of engineers, would have been different in the absence of Cisco's conduct.
- change. There, Cisco continues to make submissions contributing to Internet standards that contain its purported proprietary property in industry-standard commands. For example, in January 2015, Cisco submitted a proposal for consideration into an IETF standard, known as an internet draft, utilizing its allegedly proprietary command "default-metric." Despite the IETF's Intellectual Property Right ("IPR") policy requiring Cisco to disclose any purported intellectual property, including copyright and patents, Cisco has disclosed nothing of the sort for its submissions containing industry-standard commands.

XI. ARISTA'S PARTICIPATION IN THE RELEVANT MARKETS

- 102. Arista has sold its products in the Relevant Markets continuously since its first product release in 2008 and continues to sell its products in the Relevant Markets today.
- Exclusion Order and a Cease and Desist Order went into effect as a result of Investigation No. 337-TA-944 *Certain Network Devices, Related Software and Components Thereof (I)* ("the 944 Investigation"). These orders placed no restriction on Arista's ability to sell products in the global market. Arista continued to sell its products in the Relevant Markets (including in the United States and globally) following these orders by selling redesigned products without the features that the ITC found to infringe the patents asserted in the 944 Investigation. Arista's redesigned products were confirmed by U.S. Customs and Border Protection to be non-infringing in an April 7, 2017 ruling. Arista's redesigned products were also confirmed to be non-infringing

8

9

13 14

12

16 17

15

18

19 20

21

22

23

2425

27

26

28

by ITC Administrative Law Judge David P. Shaw in a June 20, 2017 Initial Determination in an enforcement proceeding. That Initial Determination was later remanded by the ITC back to Administrative Law Judge Shaw for further findings and that enforcement proceeding is still pending. Arista continues to sell its redesigned switch products in the Relevant Markets in the United States and globally.

104. On May 4, 2017, an International Trade Commission Limited Exclusion Order and a Cease and Desist Order went into effect as a result of Investigation No. 337-TA-945 Certain Network Devices, Related Software and Components Thereof (II) ("the 945 Investigation"). These orders again placed no restriction on Arista's ability to sell products in the global market. Arista continued to sell its products in the Relevant Markets (including in the United States and globally) following these orders by selling redesigned products without the features that the ITC found to infringe the patents asserted in the 945 Investigation. Arista asked the U.S. Court of Appeals for the Federal Circuit to stay enforcement of these 945 orders in view of final written decisions by the Patent Trial and Appeal Board finding the two relevant asserted patents invalid following inter partes review proceedings. In response, the Federal Circuit declined to stay the 945 orders but did order that Arista's redesigned products must be permitted to enter the United States. U.S. Customs and Border Protection confirmed on October 12, 2017 that Arista's redesigned products will be permitted to enter the United States at least until the ITC's 945 enforcement proceedings complete. On October 25, 2017, the ITC instituted a Modification proceeding to determine whether any modification to the Limited Exclusion Order and the Cease and Desist Order is appropriate in view of the redesigned products. Arista continues to sell its redesigned switch products in the Relevant Markets in the United States and globally.

XII. ARISTA HAS SUSTAINED AN ANTITRUST INJURY AS A DIRECT AND PROXIMATE RESULT OF CISCO'S COURSE OF CONDUCT

105. Since its founding as a company in 2004, Arista has persuaded some of the most cutting-edge technology companies in the world to adopt its products. Many of these sales were into customer environments where Cisco is the predominant vendor in the customer's network

infrastructure. Arista has pioneered a revolutionary approach to scalable, high-speed Ethernet switches that is driving new network architectures for its customers. Arista has made these advancements with a multitude of technological breakthroughs, including its EOS operating system. As one senior Cisco employee acknowledged, "Arista is truly an amazing company," and its founder is "a genius" whom "Cisco should fear whenever he treads nearby." *See* Ex. B.

- 106. Arista's success represents exactly the kind of phenomenon which would result in increased output, innovation, greater efficiency, and choice to consumers in the absence of Cisco's multifaceted scheme. The injury to Arista is a direct byproduct of the injury to consumers discussed above.
- 107. While Cisco's scheme has been designed to foreclose all innovative competition, Cisco has had a particular animus against Arista. As noted earlier, Cisco even funded and immediately acquired a start-up called Insieme that was supposed to be the "Arista killer." Insieme, however, has not succeeded in slowing Arista's momentum in the marketplace through legitimate competition. Cisco's broad-ranging scheme of anticompetitive conduct is specifically designed to preclude competitors such as Arista from making further gains in the Relevant Product Markets. Those gains would inevitably result in lower prices, increased innovation, and increased overall choice to customers.
- 108. Due to its success in the high-speed Ethernet switch markets Arista has grown to a nearly 8% share in just six years Arista would present an even greater competitive threat to Cisco's monopolies in the Relevant Product Markets if it were permitted to compete on the merits.

Indeed, the harm to Arista is a perfect proxy for the harm to industry-wide competitors and customers, because it is the type of innovative and efficient competitor that, if not improperly hindered by Cisco's overall scheme, would be able to significantly penetrate the Relevant Product Markets. That penetration, absent Cisco's conduct, would force Cisco to become more innovative and more efficient to the benefit of consumers. Instead, the opposite is occurring. Competitors such as Arista are being improperly foreclosed,

and Cisco is maintaining its dominance not by virtue of its products, but rather through its overall anticompetitive scheme.

109. Arista's injury reflects the anticompetitive effects of Cisco's exclusionary conduct. It is precisely through the exclusion of Arista and other rivals from effective competition in the Relevant Product Markets that Cisco has been able to maintain its monopoly power, resulting in higher prices, reduced output, and slowed innovation.

XIII. NO IMMUNITY

- anticompetitive conduct does not lie in its enforcement of intellectual property rights, but rather in its long-running scheme and dramatic change in policy. Cisco cannot claim any immunity for its overall anticompetitive scheme, which extends back more than a decade. For that time, upon information and belief, Cisco has embarked on a course of conduct that was executed in the marketplace with, *e.g.*, sales sheets and negotiations, marketing presentations, IETF submissions (both working group emails and internet drafts of standards), customer sales calls, engineer support calls, recruiting materials, and even intimidation tactics. All of this conduct, taken as a whole, played a part in Cisco's overall scheme to monopolize the Relevant Product Markets. As Cisco knew, its conduct created a reliance interest on the part of customers and competitors in the market, which became locked into the use of industry-standard CLI. As a result, this Court need not resolve the validity of Cisco's purported intellectual property claims before addressing the acute anticompetitive harm resulting from Cisco's conduct.
- 111. Thus, the *Noerr-Pennington* doctrine does not apply to this case. Cisco's conduct is not merely encompassed by a lawsuit or other government petitioning, nor is the lawsuit particularly relevant. Rather, Cisco's scheme has had a particular focus on *marketplace* conduct and impact, including but not limited to its decades of conduct promoting industry reliance on industry-standard commands. Cisco has even used a standard-setting body, the IETF, as a forum to further execute its scheme by encouraging and successfully securing formal standards adopted that incorporate industry-standard commands. Even with regard to Cisco's lawsuit, Cisco has brought that legal battle into the marketplace by engaging in intimidation tactics. Upon

	ı
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
	1

information and belief, Cisco specifically targeted several customers in an effort to disrupt Arista's business relations. Cisco's anticompetitive conduct could not be further from a mere lawsuit; rather it is an overall scheme focused on the marketplace that is specifically designed to foreclose competitive entry and expansion.

XIV. CLAIMS FOR RELIEF

Count I

Violation of Sherman Act § 2: Unlawful Monopolization

- 112. Arista realleges and incorporates paragraphs 1 through 111 by reference.
- 113. Cisco's conduct constitutes the intentional and unlawful maintenance of monopoly power in each of the Relevant Product Markets, in violation of Section 2 of the Sherman Act, 15 U.S.C. § 2.
- 114. For the purpose of maintaining its monopoly power, Cisco committed numerous acts, including:
- (a) Carrying out a long-time policy for over a decade that encouraged customers and competitors to utilize and innovate on top of industry-standard commands, only to reverse that policy when Cisco faced the first threat to its dominance when competitors started introducing Ethernet switches superior in quality to Cisco's; and
- (b) Engaging in associated intimidation tactics pursuant to its policy change and overall scheme to hinder competition.
- 115. Cisco has excluded competitors, including Arista, from each of the Relevant Product Markets and has deprived consumers of the benefits of competition among suppliers of switches.
- 116. Cisco does not have a legitimate business purpose for any of its anticompetitive conduct. Any claimed procompetitive benefit is pretextual in light of the obvious competitive circumstances and associated marketplace conduct inconsistent with any such benefit. Cisco's conduct does not result in any greater ability to reduce costs in producing or innovating upon Ethernet switches it sells to customers that could result in reduced prices, higher quality, or greater availability to customers. Neither does Cisco's conduct reduce barriers to other vendors'

entry, or otherwise result in greater competition in the Relevant Product Markets. The only "benefit" that flows from Cisco's conduct is a reduction in competition, and that benefit inures only to Cisco's advantage, not to that of customers or competition on the merits.

- 117. Cisco's unlawful monopolization has injured competition in each of the Relevant Product Markets, suppressed sales of Arista's products and the products of other competitors, diminished Arista's future sales opportunities and the sales opportunities of other competitors, and increased Arista's operating costs and the operating costs of other competitors.
- 118. Cisco's overall course of conduct has and will continue to, *inter alia*, maintain supra-competitive prices to customers in each of the Relevant Product Markets, harm innovation associated with the products offered in each of the Relevant Product Markets, and otherwise rob customers of their ability to make an unfettered choice of technology on the merits.

Count II

Violation of Sherman Act § 2: Attempted Monopolization

- 119. Arista realleges and incorporates paragraphs 1 through 111 by reference.
- 120. Cisco acted with a specific intent to monopolize and to destroy competition in each of the Relevant Product Markets. Cisco devised and implemented a plan to systematically eliminate competition in each of the Relevant Product Markets.
- 121. Cisco willfully engaged in a course of exclusionary conduct to obtain a monopoly in each of the Relevant Product Markets, including:
- (a) Carrying out a long-time policy for over a decade that encouraged customers and competitors to utilize and innovate on top of industry-standard commands, only to reverse that policy when Cisco faced the first threat to its dominance when competitors started introducing Ethernet switches superior in quality to Cisco's; and
- (b) Engaging in associated intimidation tactics pursuant to its policy change and overall scheme to hinder competition.
- 122. Cisco does not have a legitimate business purpose for any of its anticompetitive conduct. Any claimed procompetitive benefit is pretextual in light of the obvious competitive circumstances and associated marketplace conduct inconsistent with any such benefit. Cisco's

conduct does not result in any greater ability to reduce costs in producing or innovating upon Ethernet switches it sells to customers that could result in reduced prices, higher quality, or greater availability to customers. Neither does Cisco's conduct reduce barriers to other vendors' entry, or otherwise result in greater competition in the Relevant Product Markets. The only "benefit" that flows from Cisco's conduct is a reduction in competition, and that benefit inures only to Cisco's advantage, not to that of customers or competition on the merits.

- 123. Throughout the time Cisco engaged in this exclusionary conduct, it had a dangerous probability of succeeding in gaining a monopoly in and controlling each of the Relevant Product Markets and excluding its competitors.
- 124. Cisco's unlawful attempts to destroy competition in each of the Relevant Product Markets have injured competition in each of the Relevant Product Markets, suppressed sales of Arista's products and the products of other competitors and diminished Arista's future sales opportunities and the sales opportunities of other competitors, and increased Arista's operating costs and the operating costs of other competitors.
- 125. Cisco's overall course of conduct has and will continue to, inter alia, maintain supra-competitive prices to customers in each of the Relevant Product Markets, harm innovation associated with the products offered in each of the Relevant Product Markets, and otherwise rob customers of their ability to make an unfettered choice of technology on the merits.

Count III

Violation of Section 17200 of the California Business and Professional Code

- 126. Arista realleges and incorporates paragraphs 1 through 111 by reference.
- 127. Cisco has committed acts of unfair competition within the meaning of Section 17200 of the California Business and Professional Code, the California Unfair Competition Law ("UCL"), by engaging in unlawful and unfair conduct. Cisco's unlawful and unfair business acts and practices have harmed competition in California and elsewhere threaten significant harm to competition in the future. Cisco's conduct is a direct and proximate cause of injury to California consumers and to Arista.

- 128. Cisco has engaged in unlawful conduct pursuant to business activity in violation of the UCL. As set forth in paragraphs 112 through 125 above, Cisco's conduct violates Section 2 of the Sherman Act.
- 129. Cisco has engaged in unfair conduct within the meaning of the UCL by, *inter alia*: (1) opportunistically reversing a long-standing policy of encouraging reliance on the use of industry-standard CLI commands only when its dominant position in the Relevant Product Markets began to be threatened by competitors offering higher-quality and/or lower-cost products; (2) engaging in intimidation tactics pursuant to its shift in policy in order to induce several customers not to purchase products from Arista; and (3) interfering with Arista's relationships with vendors and suppliers.
- Ethernet switches and high-speed Ethernet switches within California and elsewhere and threatens an incipient and continuing harm to competition if not restrained. Cisco's unfair conduct also violates the policy and spirit underlying the antitrust laws. For more than a decade, Cisco knowingly encouraged the switch industry to use industry-standard CLI commands leading customers to make investments in reliance on widespread use of those commands. Cisco's conduct solidified its dominant position by ensuring that the vast majority of network engineers would be trained on industry-standard CLI. However, Cisco reversed course when its dominance was threatened by competitive suppliers making the hundreds of millions of dollars in investments necessary to develop higher-quality and/or lower-cost Ethernet switches. Customers made significant investments dependent on industry-standard CLI and, by reversing its long-standing policy, Cisco is able to opportunistically exploit those investments to lock customers into Cisco's products.
- 131. Arista has suffered injury as a direct, proximate, and foreseeable result of Cisco's unlawful and unfair business activities. Arista has suffered or faces the threat of, *inter alia*, increased costs related to unwinding its own investments in developing products in reliance on Cisco's long-standing policies, loss of customers and potential customers resulting from customer investments locking them into CLI commands that Cisco had held out as an industry

1

9

6

10 11

12 13

14

15 16

17

18 19

20

21 22

23

24

25 26

27

28

standard, loss of profits, loss of goodwill and product image, and uncertainty in Arista's own business planning and among customers regarding Cisco's future policy changes.

- 132. California consumers have been harmed and are threatened with continued harm as a direct, proximate, and foreseeable result of Cisco's unlawful and unfair activity. If Cisco's conduct is not restrained, Ethernet switch customers will either be locked into more expensive and/or lower-quality Cisco products or incur substantial costs to undo the investments they had made based on industry-standard CLI. These customers will likely pass these costs downstream or suffer from reduced output and/or decreased innovation in their own business operations. Many of these customers create products and services that are fundamental to the operation of the Internet and to emerging technologies, such as cloud computing. Cisco's conduct thus threatens to increase prices and decrease innovation in this critical sector of the California economy.
- 133. Arista is seeking a permanent injunction to prevent Cisco from interfering with Arista's prospective economic relations and from damaging competition in the Relevant Product Markets through to its anticompetitive conduct.

PRAYER FOR RELIEF

WHEREFORE, Arista prays for judgment in its favor and against Cisco as follows:

- Finding that Cisco engaged in unlawful anticompetitive conduct in violation of Section 2 of the Sherman Act (15 U.S.C. § 2), and Section 17200 of the California Business and Professional Code;
- An Order directing the termination of the anticompetitive conduct and (a) injunctive relief that restores competition to the markets at issue, including but not limited to restoring Arista to the position it would have occupied but for Cisco's unlawful exclusionary conduct;
- (b) Treble damages (including lost profits), in an amount to be determined at trial and that cannot now be adequately quantified before relevant discovery;
 - Arista's costs of suit herein, including its attorneys' fees actually incurred; (c)
 - (d) Punitive damages;

	Case 5:16-cv-0092	23-BLF Document 161-3 F	Filed 10/31/17	Page 39 of 41
1	(e)	Restitutionary relief; and		
2	(f)	Such other relief as may be ju	ist and proper.	
3	· · ·	, ,		
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
	AMEN	38 IDED COMPLAINT FOR ANTITRU	ST AND UNFAIR	COMPETITION

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

Facsimile: (202) 973-8899 Email: screighton@wsgr.com ssher@wsgr.com btennis@wsgr.com

	Case 5.10-cv-00923-BLF Document 101-3 Filed 10/31/17 Page 41 01 41
1	ROBERT A. VAN NEST (SBN 84065) BRIAN L. FERRALL (SBN 160847)
2	MICHAEL S. KWUN (SBN 198945) DAVID J. SILBERT (SBN 173128)
3	ASHOK RAMANI (SBN 200020) NICHOLAS DAVID MARAIS
4	KEKER & VAN NEST LLP 633 Battery Street
5	San Francisco, CA 94111 Telephone: (415) 391-5400
6	Facsimile: (415) 397-7188 Email:
7	<u>rvannest@keker.com</u> <u>bferrall@keker.com</u>
8	mkwun@keker.com dsilbert@keker.com
9	aramani@keker.com nmarais@keker.com
10	Attorneys for Plaintiff
11	ARISTÅ NETWORKS, INC.
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
	40 AMENDED COMPLAINT FOR ANTITRUST AND UNFAIR COMPETITION